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PATENT  
Attorney Docket No. 044508-5003-US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: **Michael Daly et al.** )  
Application No. **10/089,175** ) Group Art Unit: **1652**  
Filed: **August 07, 2002** ) Examiner: **Pak, Yong D.**  
For: **Engineered Radiation Resistant** )  
**Bioremediating Bacteria** )

U.S. Patent and Trademark Office  
Customer Service Window, Mail Stop Amendment  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

**TRANSMITTAL FORM**

- Transmitted herewith is an Response to Restriction Requirement dated April 22, 2005.
- Extension of Time: The proceedings herein are for a patent application and the provisions of 37 C.F.R. § 1.136(a) apply. Applicants petition for a one (1)-month extension of time from May 22, 2005 to June 22, 2005, the fee for which is **\$60.00** as set out in 37 C.F.R. § 1.17(a). The Commissioner is hereby authorized to charge any additional fees which may be required, including fees due under 37 C.F.R. § 1.16 and § 1.17, or credit any overpayment to Deposit Account 50-0310.
- Fee Calculation (37 C.F.R. § 1.16):

CLAIMS AS AMENDED						
	Remaining		Previously Paid	Extra	Rate	Total Fees
Total Claims	41	minus	41	0	\$50.00 each=	0.00
Independent Claims	3	minus	3	0	\$200.00 each=	0.00
First presentation of Multiple dependent claim					\$360.00	0.00
Sub-total =						0.00
Reduction by ½ for filing by a small entity						0.00
Total Fee =						\$0.00

- Fee Payment: The Commissioner is hereby authorized to charge Deposit Account No. 50-0310 for payment of any fees which the PTO believes are due.
- Constructive Petition: **Except** for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application

including fees due under 37 C.F.R. § 1.16 and § 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-0310. This paragraph is intended to be a **constructive petition for extension of time** in accordance with 37 C.F.R. § 1.136(a)(3).

Dated: **June 22, 2005**  
Morgan, Lewis & Bockius LLP  
Customer No. **09629**  
1111 Pennsylvania Avenue, N.W.  
Washington, D.C. 20004  
202-739-3000

Respectfully submitted  
**Morgan, Lewis & Bockius LLP**



\_\_\_\_\_  
Edward I. Amaya  
Registration No. 54,960

PLEASE STAMP AND RETURN TO SHOW RECEIPT OF:

In re APPLICATION of:

\*\*INVENTOR: Michael J. DALY et al.

Appln. No.: 10/089,175

Filed: August 7, 2002

FOR: Engineered Radiation Resistant  
Bioremediating Bacteria

Art Unit:: 1652

Examiner: Yong D. Pak

1. Response to Restriction Requirement with authorization to charge any fees deemed necessary by the PTO to Deposit Account No. 50-0310
2. Transmittal with authorization to charge the extension of time fee of \$60.00 to Deposit Account No. 50-0310

Attorney Docket No.: 044508-5003-US

Dated: June 22, 2005

EIA/ats





PATENT  
Attorney Docket No. 044508-5003-US

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In re Application of: <b>Michael Daly <i>et al.</i></b>	)	
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Application No. <b>10/089,175</b>	)	Group Art Unit: <b>1652</b>
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Filed: <b>August 07, 2002</b>	)	Examiner: <b>Pak, Yong D.</b>
	)	
For: <b>Engineered Radiation Resistant</b>	)	
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**RESPONSE TO RESTRICTION REQUIREMENT**

The Restriction Requirement mailed on April 22, 2005 has been received and carefully reviewed. The period for response has been extended by one month from May 22, 2005 to June 22, 2005 by the attached petition and payment of the appropriate extension of time fee.

In the Restriction Requirement, the Examiner has required Applicants to elect one strain of bacterium detoxifying at least one or two toxins expressing one heterologous protein.

Applicants traverse this election and directs the Examiner's attention to MPEP § 803 which states, "[i]f the search and examination can be made without serious burden, the Examiner must examine it on the merits, even though it includes claims to independent or distinct inventions."

Applicants assert that a single search for detoxifying bacterium that are resistant to radiation would identify relevant art, if any, relating to any bacterium that are radiation resistant and can detoxify toxins. In addition, a search for detoxifying genes transformed into a bacterium that is resistant to radiation would not be a burden because the subject matter is not extensive and a directed search would identify relevant art, if any, relating to the invention.

In addition, forcing Applicants to choose a single detoxifying agent would limit the claims to only that agent to be detoxified. Because each gene would be specific for a single agent, or a small group of agents, Applicants would unfairly be restricted to that particular detoxifying agent (thus making the species election irrelevant). Accordingly, Applicants assert that the Examiner should not restrict the claims to a

single bacterium expressing a specific heterologous protein. At minimum, the election of a particular detoxifying protein should be withdrawn because it would unduly restrict the claims to one particular detoxifying agent. Thus, Applicants request that the Examiner withdraw this election.

The Examiner also asserts that there is a lack of unity between groups I and II because the technical feature linking the inventions of groups I and II does not constitute a special technical feature as defined by PCT rule 13.2, as it does not define a contribution over the art. The Examiner refers to Lange *et al.* for that assertion (in a telephone call on May 17, 2005 with the Examiner, she stated that the Kindl reference was added in error and that Applicants need not address the reference).

Applicants traverse this lack of unity rejection and direct the Examiner's attention to the fact that the Lange *et al.* reference is the inventors own work and that it was published within a year of the instant application's priority date. Therefore, this reference is not available as prior art rendering the lack of unity of invention rejection invalid.

In addition, Applicants point out that 37 C.F.R. 1.475(b)(2) states:

"An international or a national stage application containing claims to different categories of invention will be considered to have unity of invention if the claims are drawn only to one of the following combinations of categories: ... (2) A product and process of use of said product; or ..."

In this application, group I has claims drawn to a radiation resistant bacterium and group II has claims drawn to methods of using the radiation resistant bacterium. Furthermore, the radiation resistant bacterium of group I is required to practice the claimed method (*i.e.*, process of use) of group II. Thus, the inventions of groups I and II are linked to form a single general inventive concept. Therefore, for the reasons stated above, Applicants request that the lack of unity of invention rejection be withdrawn and that groups I and II be examined together.

In order to be fully responsive, however, Applicants hereby provisionally elect to prosecute the claims in group I (claims 1 to 31, 35 to 37 and 41, drawn to radiation resistant bacterium). In addition, Applicants provisionally elect the bacterium *Deinococcus* and the detoxifying proteins encoded by the *mer* operon.

The Examiner has also required electing a single disclosed species for prosecution if no generic claim is finally held to be allowable. The Examiner has required an election of either (A) toxins, (B)

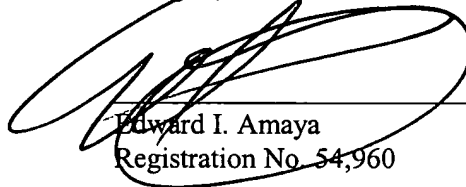
radionucleotides, (C) heavy metals or (D) organic compounds. Applicants elect (C) heavy metals, which read upon claims 4, 6, 12, 16, 18, 24, 29 and 30.

As noted in the Office Action, upon the allowance of a generic claim, Applicants will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 C.F.R. 1.141. Accordingly, upon allowance of generic claims 1 to 3, 12 to 15, 25 to 28, 32 to 34 and 41, Applicants will be entitled to consideration of the other claimed species.

**EXCEPT** for issue fees payable under 37 C.F.R. 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. 1.136(a)(3).

Dated: **June 22, 2005**  
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